UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/614,738	07/07/2003	Debasis Mitra	Mitra 24-8-11-6	6213

46303 7590 05/25/2010

RYAN, MASON & LEWIS, LLP
1300 POST ROAD, SUITE 205
FAIRFIELD, CT 96824

EXAMINER	
KASRAIAN, ALLAHYAR	
ART UNIT	PAPER NUMBER
2617	

MAIL DATE	DELIVERY MODE
05/25/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/614,738	MITRA ET AL.	
	Examiner	Art Unit	
	ALLAHYAR KASRAIAN	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 February 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Remarks

1. The present Office Action is in response to Applicant's appeal brief filed on Feb. 22, 2010. **Claims 1-24** are still pending in the present application. **This Action is made FINAL**.

Response to Arguments

2. Applicant's arguments with respect to claims 1, 21, and 22 have been considered but are moot in view of the new ground(s) of rejection.

In the second paragraph of page 11 of the Applicant's arguments/remarks, Applicant argues, "Applicants also note that, as the Examiner previously acknowledged, Aukia discloses a technique similar to OSPF and teaches that each node in the network determines, in a distributed manner, *the path for the source-destination pair that traverses the node.* In fact, OSPF is well known to require that each node in the network determines, in a *distributed* manner, *the path for the source-destination pair that traverses the node.*" In the first full paragraph of page 12 of the Applicant's arguments/remarks, Applicant further argues, "Furthermore, Aukia's teaching to have *each node along a path compute its own route to a next node teaches away from* the present invention's." Examiner respectfully disagrees. Examiner never acknowledged the combination of Aukia's teachings with other references could not be used for rejecting the claims. In fact, Aukia's teachings can be used for combining with other references to provide rationales that support a conclusion of obviousness such

including:

(A) Combining prior art elements according to known methods to yield predictable results;

(B) Simple substitution of one known element for another to obtain predictable results;

(C) Use of known technique to improve similar devices (methods, or products) in the same way;

(D) Applying a known technique to a known device (method, or product) ready for improvement to yield predictable results;

(E) "Obvious to try" – choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success;

(F) Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations are predictable to one of ordinary skill in the art;

(G) Some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention. (See MPEP § 2141 III. Rationales to support rejections under 35 U.S.C. 103).

In response to Applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208

USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

3. Applicant arguments with respect to claim 23, filed Feb. 22, 2010 have been fully considered but they are not persuasive.

In the bridging paragraph between page 13 and 14 the Applicant's arguments/remarks, Applicant argues, “Applicants note that Szviatovszki teaches "preemption" in the cited text.” Examiner respectfully could not find any argument why teaching of "preemption" provides any differences against Applicant's claimed invention.

In response to the Applicant's argument that “Szviatovszki does not disclose or suggest attempting to create a connection and does not disclose or suggest attempting to create a connection on the second shortest path if a length of the second shortest path is equivalent to a length of the first shortest”, Examiner considers there is no functional differences between choosing the first of second shortest paths if a length of the second shortest path is equivalent to length of the first shortest path and it is the matter of Design Choice (see the rejection).

In the first full paragraph of page 14 of the Applicant’s arguments/remarks, Applicant asserts, “Applicants also note that the word "length" is defined as "the longest extent of anything as measured from end to end." (See, dictionary.com.)” Examiner previously asked Applicant tor provides a length information based on the Applicant's invention and differences between his invention and the prior art. However, Applicant only relies on the general definition of “length” dictionary.com. However, Examiner

notes, the definition of length in the Applicant's specification, "Length for a path may be a function of actual distance or other salient parameters used in the optimization criteria."

Applicant further argues, "Szviatovszki teaches that, "if two paths have different, highest-affected priority levels, the path with the lower priority level is chosen. But if the affected priority levels are the same, *the 'smaller' path is selected with the lowest pre-empted bandwidth on the highest affected priority level."* (Col. 12, lines 37-43; emphasis added.) Contrary to the Examiner's assertion, Szviatovszki does *not* disclose or suggest length information; Szviatovszki discloses priority levels and pre-empted bandwidth." Examiner respectfully disagrees Szviatovszki clearly teaches "smaller path" selection and choosing the shortest path based on OSPF as cited above and in col. 13, lines 11-30 and TABLE 1.

In the second full paragraph of page 14 of the Applicant's arguments/remarks, Applicant argues, "Applicants also could find no disclosure or suggestion that the length information is provided by the OSPF protocol, or that it is combined by bandwidth availability information of the links to utilize a rerouting mechanism." Examiner respectfully traverses. Based on Applicant's own definition, Length for a path may be other salient parameters used in the optimization criteria." Moreover, Examiner provides teachings of Hameleers to prove that one of the metrics of OSPF is the distance (length) metric.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections

are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant(s) are remained that the Examiner is entitled to give the broadest reasonable interpretation to the language of the claim. The Examiner is not limited to Applicant's definition, which is not specifically set fourth in the claims, *In re Tanaka et al,* 193 USPQ 139, (CCPA) 1977.

The references made herein are done so for the convenience of the Applicant. They are not meant to be limiting and should be considered as a whole.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. **Claims 1-22** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the request" in line 5 and “said requested connection" in line 9. There is insufficient antecedent basis for this limitation in the claim. It is unclear that “said requested connection" in line 9 of the claim refers to "a connection request" in line 3, or "the request" in line 5.

Claim 21 recites the limitation "the request" in line 8 and “said requested connection" in line 12. There is insufficient antecedent basis for this limitation in the claim. It is unclear that “said requested connection" in line 12 of the claim refers to "a

connection request" in line 5, or "the request" in line 8.

Claim 22 recites the limitation "the request" in line 7 and “said requested connection" in line 11. There is insufficient antecedent basis for this limitation in the claim. It is unclear that “said requested connection" in line 11 of the claim refers to "a connection request" in line 5, or "the request" in line 7.

Claims 2-20 are also rejected by the virtue of their dependency on **claim 1**.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the Examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the Examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. **Claims 1-4, 6, 21, 22, and 24** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Devi (US patent Application Pub. # 2003/0147400 A1)** in view of **Elie-Dit-Cosaque et al. (US Patent Application Pub. # 20040218525)** (hereinafter Elie) in view of **Aukia et al. (US Patent # 6594268 B1)** (hereafter Aukia) further in view of **Soumiya et al. (US patent Application Pub. # 2001/0037401 A1)** (hereinafter Soumiya).

Consider **claims 1, 21, and 22**, Devi discloses an apparatus for traffic engineering for in a network-based communication system, the apparatus comprising:

a memory (FIG. 2 for memory 206, and lines 1-3 of par. 0021);

and at least one processor, coupled to the memory (FIG. 2 processor 204 and lines 1-3 of par. 0021);

Devi discloses the apparatus operative, a method, and a computer-readable medium including computer codes (FIG. 2 code 208 and par. 0023 and 0024) to perform the method, comprising:

to determine, in response to a request, whether any path of a plurality of predetermined paths between a source node and a destination node meets at least one requirement corresponding to the request (claim 1 lines 5-8, claim 8, par. 0018 and 0019),

wherein the plurality of predetermined paths are determined by substantially maximizing carried demand on a network (par. 0007, 0020, 0025, claim 5) using at least traffic demand estimates, and network topology information, and by performing routing for the substantially maximized carried demand (FIG.1 for nodes 102, links 104 and server 200 and par. 0014; FIG. 2 for Demands 212 and Topology Information 214 lines 10-13 of par. 0026 for demands and request; lines 2-3 of par. 0004 and 0005, 0028 and 0029 for traffic demand estimation and network topology); and

selecting one of said predetermined paths for said requested connection based on current load measurement, if a given path meeting the at least one requirement is found, to attempt to create a connection utilizing the given path (abstract, par. 0005, 0018-0019, 0022; col. 0046-0049 for optimum path selection specifically).

However, Devi fails to explicitly disclose the request for the path determination is a connection request (between the source node and the destination node).

In the same field of endeavor, Elie discloses a path determination is in response to a connection request between a source node and a destination node (FIG. 4, par. 0031).

Therefore, it would have been obvious to a person of ordinary skills in the art at the time the invention was made to include a connection request received at a sources node to compute a working path based on the network topology acquired from a centralized node as taught by Elie to the server node as disclosed by Devi for purpose of determining optimized paths between source and destaiation nodes.

However, Devi as modified by Elie fails to explicitly disclose the maximizing

carried demand on a network using at least traffic demand estimates and network topology information.

In the same field of endeavor, Aukia discloses the maximizing carried demand on a network using at least traffic demand estimates and network topology information (col. 21 lines 23-51; col. 10 lines 24-33).

Therefore, it would have been obvious to a person of ordinary skills in the art at the time the invention was made to incorporate defining the network topology, traffic characteristics and demand for service as taught by Aukia to the optimization method based on demand estimate as disclosed by Devi as modified by Elie for purpose of maximizing revenue based on current and past history of data traffic of a router.

However, Devi as modified by Elie as modified by Aukia fails to disclose explicitly selecting one of said predetermined paths based on current load measurement at source node.

In the same field of endeavor, Soumiya discloses selecting one of said predetermined paths based on current load measurement at source node (FIGS. 1A and 1B, abstract, par. 0232).

Therefore, it would have been obvious to a person or ordinary skill in the art at the time the invention was made to incorporate calculating load in the source router as taught by Soumiya to the method of selecting a path for traffic between source and destination nodes disclosed by Devi as modified by Elie as modified by Aukia for purpose of selecting a transmission path.

Consider **claim 2**, Devi as modified by Elie as modified by Aukia further modified by Soumiya discloses the claimed invention **as applied to claim 1 above**, in addition Devi discloses the carried demand comprises a total amount of demand that can be carried in the network (lines 1-2 of par. 0026).

Consider **claim 3**, Devi as modified by Elie as modified by Aukia further modified by Soumiya discloses the claimed invention **as applied to claim 1 above**, in addition Devi discloses the at least one requirement comprises a destination address and a bandwidth (FIG. 2 for destination 218 of demands 212, lines 5-6 of par. 0026; link information 224 including assigned bandwidth and available bandwidth, lines 10-15 of par. 0027 and lines 1-3 of col. 0041).

Consider **claim 4** Devi as modified by Elie as modified by Aukia further modified by Soumiya discloses the claimed invention **as applied to claim 1 above**, and Aukia further discloses determining the traffic demand estimates based at least in part on previously measured traffic demands or historical traffic demands (FIG. 10 step 1003 and lines 46-51 of col. 21); and

determining network topology by using information from link-state routing (FIG. 5 and lines 48-52 of col. 13).

Consider **claim 6** Devi as modified by Elie as modified by Aukia further modified by Soumiya discloses the claimed invention **as applied to claim 1 above**, and Aukia

further discloses the step of: refusing the connection request if there are no paths in the plurality of predetermined paths meeting the at least one requirement or when the connection utilizing the given path is unavailable (lines 20-22 of col. 22).

Consider **claim 24**, Devi as modified by Elie as modified by Aukia further modified by Soumiya discloses the claimed invention **as applied to claim 1 above**, in addition Devi discloses the step of dynamically determining a path between the source node and the destination node if none of said plurality of predetermined paths meet the at least one requirement, wherein said dynamic path is determined at the source node (par. 0024 for updating path assignment).

8. **Claims 5, 7-9, 13, and 16** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Devi (US patent Application Pub. # 2003/0147400 A1)** in view of **Elie-Dit-Cosaque et al. (US Patent Application Pub. # 20040218525)** (hereinafter Elie) in view of **Aukia et al. (US Patent # 6594268 B1)** (hereafter Aukia) in view of **Soumiya et al. (US patent Application Pub. # 2001/0037401 A1)** (hereinafter Soumiya) further in view of **Szviatovszki et al. (US Patent # 6956821 B2)** (hereafter Szviatovszki).

Consider **claim 5** Devi as modified by Elie as modified by Aukia further modified by Soumiya discloses the claimed invention **as applied to claim 1 above**, in addition Devi discloses substantially maximizing the carried demand using at least the traffic

demand estimates and the network topology (lines 2-4 of par. 0004);

performing routing for the substantially maximized carried demand, thereby determining a plurality of resultant paths(lines 7-9 of par. 0005);

However, Devi as modified by Aukia further modified by Soumiya fails to disclose storing the plurality of resultant paths as the predetermined paths.

In the same field of endeavor, Szviatovszki discloses storing the plurality of resultant paths as the predetermined paths (FIG. 2 block 20, lines 23-28 of col. 4).

Therefore, it would have been obvious to a person of ordinary skills in the art at the time the invention was made to incorporate the storing of calculated paths to a database as taught by Szviatovszki to the path calculation method as disclosed by Devi as modified by Elie as modified by Aukia further modified by Soumiya for purpose of saving the calculated paths as future reference. The proper motivation is to use the saved calculated paths from the database of a router for future estimation of the paths in a network.

Consider **claim 7** Devi as modified by Elie as modified by Aukia further modified by Soumiya discloses the claimed invention **as applied to claim 1 above**, in addition Devi discloses the network topology comprises nodes interconnected through edges (FIG. 1 for nodes 102 and edges 104 and par. 0014);

However, Devi as modified by Elie as modified by Aukia further modified by Soumiya fails to disclose the request is made by a source node; the method further comprises the steps of: determining whether a designed load between the source node

and a destination node is greater than a measured load between the source and destination nodes; when the designed load between the source node and the destination node is greater than a measured load between the source node and the destination node, pruning edges that do not have a first available bandwidth from the network, thereby creating a first pruned network; and when the designed load between the source and a destination is not greater than a measured load between the source and destination, pruning edges that do not have a second available bandwidth from the network, thereby creating a first pruned network.

In the same field of endeavor, Szviatovszki discloses the request is made by a source node (FIGS. 1 and 2, lines 11-14 of col. 5);

the method further comprises the steps of:

determining whether a designed load between the source node and a destination node is greater than a measured load between the source and destination nodes (lines 50-58 of col. 1 and lines 59-67 of col. 9 for Dijkstra CSPF algorithm for minimizing cost of the path);

when the designed load between the source node and the destination node is greater than a measured load between the source node and the destination node, pruning edges that do not have a first available bandwidth from the network, thereby creating a first pruned network (lines 59-67 of col. 9; col. 13 lines 11-45 and the limitations can be interpreted explicitly on the 5th method of TABLE 1 with three combinations of ordering metrics such as shortest path and free bandwidth selections); and

when the designed load between the source and a destination is not greater than a measured load between the source and destination, pruning edges that do not have a second available bandwidth from the network, thereby creating a first pruned network (lines 59-67 of col. 9 and lines 29-38 of col. 10; col. 13 lines 11-45 and the limitations can be interpreted explicitly on the 5th method of TABLE 1 with three combinations of ordering metrics such as shortest path and free bandwidth selections).

Therefore, it would have been obvious to a person of ordinary skills in the art at the time the invention was made to incorporate load balancing between source and destination node with consideration of available bandwidth as taught by Szviatovszki to the network management method as disclosed by Devi as modified by Aukia further modified by Soumiya for purpose of choosing a path in order to balance the network load.

Consider **claim 8 as applied to claim 7 above**, Szviatovszki further discloses the first bandwidth is zero and the second bandwidth is a predetermined trunk reservation (lines 49-56 of col. 10 and lines 1-5 of col. 11).

Consider **claim 9 as applied to claim 7 above**, Szviatovszki further discloses the steps of determining whether a designed load, pruning edges that do not have a first available bandwidth from the network, and pruning edges that do not have a second available bandwidth from the network are performed prior to the step of determining, in response to a request, whether any path of a plurality of paths meets at least one

requirement; and the method further comprises performing, if a given path meeting the at least one requirement is not found, the following steps: pruning edges that do not have a first available bandwidth from the first pruned network to create a second pruned network; computing shortest path from the source node to the destination node in the second pruned network; and attempting to create a connection on the shortest path (lines 17-24 of col. 13).

Consider **claim 13**, Devi as modified by Elie as modified by Aukia as modified by Soumiya further modified by Szviatovszki discloses the claimed invention **as applied to claim 5 above**, in addition Devi discloses the step of performing routing further comprises the step of performing routing for the substantially maximized carried demand, subject to a plurality of second constraints (FIG.3 with consideration of substantially maximized carried demand as optimization of network paths between nodes, par. 0031, 0032 and par. 0025, the second constraints as service classes or capacity link).

Consider **claim 16 as applied to claim 5 above**, Szviatovszki further discloses the step of performing routing further comprises the step of minimizing a total bandwidth-length product subject to a plurality of constraints including path-assignment constraints (lines 26-29, 33-39 and 46-50 of col. 9).

9. **Claim 23** is rejected under 35 U.S.C. 103(a) as being unpatentable over

Szviatovszki et al. (US Patent # 6956821 B2) in view of **Shabtay et al. (US Patent # 6895441 B1)** (hereafter Shabtay) further in view of **Hameleers et al. (US Patent Application Pub. # 2001/0026549 A1)** (hereinafter Hameleers).

Consider **claim 23**, Szviatovszki discloses a method for traffic engineering for a network-based communication system comprising a network having nodes interconnected through edges, and wherein a source node requests a connection to a destination node, the method comprising the steps of (FIG. 1):

determining a first shortest path between the source node and destination node (col. 9 lines 33-39, col. 13 lines 10-30);

pruning edges not having a first available bandwidth from the network, thereby creating a first pruned network (col. 13 lines 10-30)

computing a second shortest path between the source node and the destination node using the first pruned network (Table 1 for 2nd method, and lines 14-26 of col. 13);

However, Szviatovszki does not disclose expressly if a length of the second shortest path is equivalent to a length of the first shortest path, attempting to create a connection on the second shortest path.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to attempt to create a connection on either the first shortest path or the second shortest path (see col. 13 lines 10-30 and TABLE 1, for path selection restricted to shortest paths). Applicant has not disclosed that attempting to create a connection on the second shortest path (if a length of the second shortest

path is equivalent to a length of the first shortest path) provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well to attempt to create a connection on first shortest path because the length of first and the second shortest path are the same.

Therefore, it would have been obvious to one of ordinary skill in this art to modify Szviatovszki's invention to obtain the invention as specified in claim 23.

However, Szviatovszki fails to explicitly discloses if a length of the second shortest path is not equivalent to a length of the first shortest path, performing the following steps: pruning edges not having a second available bandwidth from the first pruned network, thereby creating a second pruned network; computing a third shortest path between the source node and destination node using the second pruned network; and attempting to create a connection on the third shortest path.

In the same field of endeavor, Shabtay discloses if a length of the second shortest path is not equivalent to a length of the first shortest path, performing the following steps (this condition could be interpreted as unsuccessful first search indicated in lines 18-19 of col. 5; lines 14-21 of col. 4 and lines 12-22 of col. 5, for the first path search with the required bandwidth; lines 35-42 and 61-67 of col. 4):

pruning edges not having a second available bandwidth from the first pruned network, thereby creating a second pruned network (lines 19-22 of col. 5);

computing a third shortest path between the source node and destination node using the second pruned network (lines 19-22 of col. 5); and

attempting to create a connection on the third shortest path (lines 19-22 of col. 5 for the second search, the path chosen from protected paths and unprotected path are considered as the first pruned network and combined bandwidth is considered as the second available bandwidth, with consideration of Szviatovszki's teaching on col. 13 lines 11-45 and the limitations can be interpreted explicitly on the 5th method of TABLE 1 with three combinations of ordering metrics such as shortest path and free bandwidth selections).

Therefore, it would have been obvious to a person of ordinary skills in the art at the time the invention was made to incorporate second bandwidth to prune the network as taught by Shabtay to one the path metrics disclosed by Szviatovszki for purpose of selecting best available links between different nodes in a network. The proper motivation is to choose the best available links between nodes in a network.

However, Szviatovszki as modified by Shabtay fails to disclose whether one of the metrics of OSPF is the distance metric such as physical distance.

In the same field of endeavor, Hameleers disclsoes one of the metrics of OSPF is the distance metric such as physical distance.

Therefore, it would have been obvious to a person or ordinary skill in the art at the time the invention was made to incorporate the metric such as physical distance as taught by Hameleers to method of finding a route based on OSPF protocol with consideration of available bandwidth of the paths disclosed by Szviatovszki as modified by Shabtay for purpose of determining the shortest path between two nodes.

Allowable Subject Matter

Claims 10-12, 14, 15, and 17-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

a. Iwata et al. (U.S. Patent # 7047316 B2) disclose Link state routing techniques.

12. Any response to this Office Action should be **faxed to** (571) 273-8300 **or mailed to**:

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

13. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Allahyar Kasraian whose telephone number is (571) 270-1772. The Examiner can normally be reached on Monday-Thursday from 8:00 a.m. to 5:00 p.m.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Rafael Pérez-Gutiérrez can be reached on (571) 272-7915. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you

have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 571-272-4100.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

/Allahyar Kasraian/

Examiner, Art Unit 2617

/Rafael Pérez-Gutiérrez/

Supervisory Patent Examiner, Art Unit 2617

May 20, 2010